

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Thomas P. Glenn, Steven Webster, Roy Dale
Hollaway
Assignee: Amkor Technology, Inc.
Title: FLIP CHIP ON GLASS IMAGE SENSOR PACKAGE
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Docket No.: G0030

Monterey, CA
September 18, 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claims 1, 11, 13, 21, 27, 28, and 29 have been amended as follows:

1. (TWICE AMENDED) A structure comprising:
an image sensor having an active area and a bond pad on a first surface of said image sensor;
a window having an interior surface and an exterior surface opposite said interior surface, said interior surface of said window facing said first surface of said image sensor [and having a total area], the area of said interior surface of said window being less than [a total] the area of said first surface of said image sensor; and
an electrically conductive via extending through said window from said interior surface to said exterior surface of said window, said via being electrically connected to said bond pad.

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11. (AMENDED) The structure of Claim 10 wherein said exterior trace is a land aligned with said via and said electrically conductive pad.

13. (AMENDED) The structure of Claim 10 wherein said via is offset from said electrically conductive pad, said exterior trace extending along said exterior surface of said window to electrically connect said via to said electrically conductive pad.

21. (TWICE AMENDED) An image sensor package comprising:
an image sensor having an active area and bond pads on a first surface of said image sensor;

a window having an interior surface and mounted to said image sensor, the area of said interior surface of said window [having an area] being less than [an] the area of said first surface of said image sensor;

a plurality of electrically conductive interior traces on an interior surface of said window;

a plurality of electrically conductive bumps electrically and physically connecting said bond pads to said interior traces;

a plurality of electrically conductive vias extending from said interior surface of said window to an exterior surface of said window, said vias being electrically connected to said interior traces;

a plurality of electrically conductive exterior traces on said exterior surface of said window, said exterior traces being electrically connected to said vias;

a plurality of electrically conductive pads on said exterior traces; and

a plurality of electrically conductive interconnection balls on said electrically conductive pads.

27. (TWICE AMENDED) An image sensor package comprising:

an image sensor having a bond pad on a first surface of said image sensor;

a window having an interior surface, the area of said interior surface of said window being less than the area of said first surface of said image sensor;

an electrically conductive interior trace on said interior surface of said window; and

an electrically conductive bump electrically connecting said bond pad to said interior trace.

28. (AMENDED) The structure of Claim 10 further comprising an electrically conductive interconnection ball on said electrically conductive pad.

29. (AMENDED) An image sensor package comprising:

an image sensor having an active area and bond pads on a first surface of said image sensor;

a window mounted to said image sensor, the area of said window in a plane parallel to said first surface of said image sensor being less than the area of said first surface of said image sensor [in said plane];

a plurality of electrically conductive interior traces on an interior surface of said window;

a plurality of electrically conductive bumps electrically and physically connecting said bond pads to said interior traces;

a plurality of electrically conductive vias extending from said interior surface of said window to an exterior surface of said window, said vias being electrically connected to said interior traces;

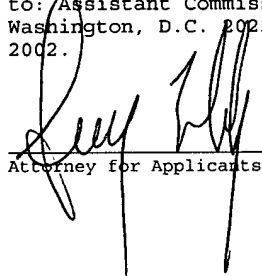
a plurality of electrically conductive exterior traces on said exterior surface of said window, said exterior traces being electrically connected to said vias;

a plurality of electrically conductive pads on said exterior traces; and

a plurality of electrically conductive interconnection balls on said electrically conductive pads.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on September 18, 2002.


Attorney for Applicants

September 18, 2002
Date of Signature